

TWO NEW SPECIES OF HELICONIA (MUSACEAE)  
FROM THE CANAL ZONE AND PANAMA

ROBERT R. SMITH  
Department of Biology  
Hartwick College, Oneonta, New York

A recent revision of the genus Heliconia in Middle America was made with one of the results being two new species of Heliconia from the Canal Zone. These species also occur in the surrounding provinces of Panama.

1. Heliconia catheta R. R. Smith, sp. nov.  
~~~~~ ~~~~~

Planta musoidis, 3-5 m. alta. Folia longe petiolata, petioli 1/2-1 m. longi; lamina oblonga, 3/4-1 3/4 m. longa, 15-36 cm. lata, apice acuminata, basi obtuso-truncata; superne minora utrinque viridis, glabra. Inflorescentia pendula; rhachi flexuoso, puberuli, aureo-brunnei. Bracteeae 10-20, basi scarlatina, apice aureo-viridi, area latere comesina ovato-lanceolatae, bono modo cymbiformibus profundus. Bracteeae infernae 26-28 cm. longae. Bracteeae internaes florales translucidae, lanceolatae, puberulae, 4 cm. longae, 0.8 cm. latae. Flores in bractearum axillis ca. 6-8, lutei. Perianthium 4-5 cm. longum. Pedicellus 0.9-1.3 cm. longus, puberulissimo. Fructus subglobosus, caeruleus profundus, diametro 1.2-1.3 cm.

Moderately stout plant, 3-5 m. tall; musoid habit. Leaf-blade oblong, 3/4-1 3/4 m. long, 15-36 cm. wide, slightly acuminate-obtuse apex, obtuse-truncate base; upper and lower surfaces of leaves green; petiole 1/2-1 m. long, stout. Inflorescence pendent, elongated, 70-100 cm. long; peduncled; rachis moderately flexuose and spiraled, golden-brown puberulent, 0.4-0.5 cm. diameter. Branch-bracts 10-20, scarlet at base, yellow-green at apex, crimson patches on side, pubescent over outer surface of bract or just around base, ovate-lanceolate, moderately deep boat-shaped; lowest branch-bract ca. 40 cm. long, sterile; lowest fertile branch-bract 26-28 cm. long; middle branch-bracts gradating from 18-20 cm. long, upper branch-bracts 16-10 cm. long, all branch-bracts 2.0-3.5 cm. side-width; internodes between lower branch-bracts 5.6 cm. Floral-bracts lanceolate with translucent or thick border, puberulent, 4 cm. long, 0.8 cm. wide. Flowers 6-8 per branch-bract, yellow 6-7 cm. long; perianth 4-5 cm. long, lower 2/3 of calyx puberulent, upper 1/3 glabrous; ovary drying dark, puberulent or glabrous; pedicel 0.9-1.3 cm. long, strongly puberulent. Fruit dark blue, hairy, subglobose, 1.2-1.3 cm. diameter when dried.

Type: PANAMA. near old Fort Lorenzo, mouth of Rio Charges, 8 March 1923, C. V. Piper 6037 (US) (Fig. 1).

Distribution: In openings of moist forest at low altitudes. In Middle America, it appears to be restricted to Panama. It apparently extends southward into Columbia and Venezuela (Aristeguieta, 1961).

The specific epithet is taken from the Greek word, cathet, which means "hanging down."

This species has long been confused with H. platystachys Baker (Standley, 1928; Woodson and Shery, 1945; Aristeguieta, 1961). A study of the phototype clearly indicates that the Canal Zone and Panama species is definitely not H. platystachys Baker.

Representative Specimens:

PANAMA: CANAL ZONE: Barro Colorado Island, A. M. Chickering 16 (Mich); Barro Colorado Island, Croat 6387 (MO); Barro Colorado Island, Croat 5616 (MO); Summit Gardens, Croat 10790 (MO); Barro Colorado Island, D. Fairchild 17 (F); in openings in forest, Barro Colorado Island, L. A. Kenoyer 232 (US); vicinity Nuevo Emperador, S. McDaniel 2394 (FSU); near Frijoles, Rio Agua Salud, C. V. Piper 5856 (US); in thicket 4.7 mi. e. of Fort San Lorenzo, R. R. Smith 2166 (FLAS); in forest, Albrook Air Force Base Research Forest Site, W. R. Stimson 5068 (DUKE). PROV. CHIRIQUI: Puerto Armelles, M. E. Davidson 1179 (F); vicinity of San Bartolome, Peninsula de Burica, alt. 0-50 m., R. E. Woodson, Jr. and R. W. Shery 891 (MO). PROV. COLON: 1/4 mi. n. of Maria Chiquita, Croat 11353 (MO). PROV. DARIEN: Santa Fe, Duke 14269 (MO); vicinity of Paya, W. L. Stern, K. L. Chambers, J. D. Dwyer, J. E. Ebinger 427 (GH, MO, US). vicinity of Campamento Bueno Vista, Rio Chucunaque above confluence with Rio Tuquesa, W. L. Stern, K. L. Chambers, J. D. Dwyer, J. E. Ebinger 925 (GH, MO, US). PROV. PANAMA: Vacamonte Pt., Allen 2959 (MO); Rio Tapia, Bartlett and Lasser (MO); near big swamp e. of Rio Tecumen, P. C. Standley 26726 (US); w. of Chepo, Tyson 6701 (MO).

2. Heliconia irrasa R. R. Smith, sp. nov.

Planta musoidis, 1.5-2.0 m. alta. Folia petiolata, petioli ca. 48 cm. longi, lanati circum vaginam; lamina oblonda ad oblongo-ovata, 35-71 cm. longa, 7-15 cm. lata, apice acuminata, basi obtuso. Inflorescentia erecta, aliquando nutans, villosa, ca. 25 cm. longa; rhachi parum flexuoso, spirali, villosa-lanati. Bracteae 5-9, leutae, margine rubrae vel omnino rubrae, villosa-lanatae, ovato-lanceolatae, apice acuminata circinata, cymbiformibus non profundus. Bracteae internae florales lato-lanceolatae, 4 cm. longae, membranaceae, pubescentia. Flores in bractearum axillis ca. 6, lutei. Perianthium 4.0-5.2 cm. longum. Pedicellus ca. 0.5 cm. longus, tomentellus. Fructus subglobosus, diametro 0.7 cm., fuscatus.



Notes on Heliconia spp. from Cabal Zone.

C. Y. Fisher.

(1) Specimens with glaucous petioles on green leaves. Plants 10 to 13 feet high. Leaf specimens with poor dried fruits from 10 to 13 feet high. Specimens from 10 to 13 feet high. Specimens with glaucous petioles on green leaves.

Fig. 1. Holotype of Heliconia catheta (US).

Moderately stout plant, 1.5-2.0 m. tall; musoid habit. Leaf-blade oblong to oblong-ovate, 35-71 cm. long, 7-15 cm. wide; acuminate apex, obtuse base; upper surface green, lower surface slightly paler; petiole prominent, ca. 48 cm. long, woolly around sheath. Inflorescence erect, sometimes nodding, villous, 25 cm. long; peduncle nearly woolly; rachis slightly flexuose and spiraled; villous-woolly, 0.4-0.5 cm. diameter. Branch-bracts 5-9, either dark red or yellow with red margin (the latter more common), moderately villous-woolly, ovate-lanceolate with acuminate apex circinate-curved, shallow boat-shaped; lowest branch-bract often extends into leaf-blade, often sterile, total length 16-60 cm. long; lowest fertile branch-bract 10-17 cm. long; middle branch-bracts 8-12 cm. long; all branch-bracts 1.5-2.2 cm. side-width; lower branch-bracts separated by internodes of 2-3 cm. Floral-bracts wide-lanceolate, 4 cm. long, 0.8 cm. wide, membranous, puberulent to slightly pubescent. Flowers ca. 6 per branch-bract, yellow, 5-6 cm. long; perianth 4.0-5.2 cm. long, nearly glabrous to slightly tomentose; pedicel 0.5 cm. long, slightly tomentose; ovary smooth. Fruit dark, subglobose, 0.7 cm. diameter. Seed not seen.

Type: PANAMA. PROV COCLE: El Valle de Anton, North Hills, June 29, 1946 P. H. Allen 3547 (MO). Isotypes (F, GH, US) (Fig. 2).

Distribution: Found in woods and forests, generally at lower altitudes. This species was thought to be endemic to Panama. Recent verbal reports indicate that it may also occur in Costa Rica.

The specific epithet of H. irrasa comes from the Latin "inrasa" which means unshaved. This name was suggested by I. E. Lane in unpublished studies on the genus in the 1950's.

Heliconia irrasa has also been called H. tortuosa and H. villosa. Heliconia tortuosa is geographically distributed in northern Central America, and has red branch-bracts, which are not villous-woolly. It does possess scattered short hairs on the branch-bracts. Heliconia villosa may be confused with H. irrasa, since both are villous-woolly. However, H. villosa is of shorter stature, has more and shorter branch-bracts, sessile flowers, and is pendent. Heliconia villosa occurs in South America.

Representative specimens:

PANAMA: CANAL ZONE: Barro Colorado Island, S. Aviles 38 (F); vicinity of hill C-6, Fort Sherman, J. A. Duke 4426 (MO); Fort San Lorenzo, J. E. Ebinger 472 (MO); Barro Colorado Island, D. Fairchild 7 (F); in woods near Gatun Sta. P. R. R., G. Hager 363 (NY); Armour Trail, Barro Colorado Island, D. E. Starry 51 (F); Barro Colorado Island, R. E. Woodson, Jr. and R. W. Shery 983 (MO). PROV COCLE: hills n. of El Valle, alt. 1000 m., P. H. Allen 2167 (GH, MO, NY, US); hills n. of El Valle de Anton, vicinity of La Mesa, alt. 1000 m., P. H. Allen 2490 (US); North Hills, El Valle de Anton, P. H. Allen 3547 (F, GH, MO, US).



Fig. 2. Holotype of Heliconia irrasa (MO).

PROV. COLON: vicinity of Camp Pina, alt. 25 m., P. H. Allen 3582 (F, GH, US); Portobello, Las Cruces Trail, J. E. Ebinger 104 (MO); Gatun Lake, Goodyear, Allweather Estate, R. J. Seibert 1520 (MO). PROV. PANAMA: Cerro Campana, el. ca. 2300 ft., K. E. Blum, S. Olson, and R. R. Rasmussen 2377 (FSU, MO).

## ACKNOWLEDGEMENTS

The author wishes to acknowledge Dr. W. W. Payne and Dr. D. B. Ward for access to The Herbarium, University of Florida, and for reading this manuscript. He would also like to thank Dr. Thomas B. Croat of the Missouri Botanical Garden for his valuable comments and additional representative specimens.

## LITERATURE CITED

- Aristeguieta, L. 1961. El Genero Heliconia En Venezuela. Instituto Botanico. Dirección De Recursos Naturales Renovables Ministerio De Agricultura Y Cría. Caracas-Venezuela. No. 8.
- Smith, Robert R. 1968. A Taxonomic Revision of the Genus Heliconia in Middle America. Ph.D. Thesis. University of Florida. Gainesville, Fla.
- Standley, P. C. 1928. Flora of the Panama Canal Zone. Contrib. U.S. Nat. Herb. 27: 116-117.
- Woodson, R. E., Jr. and Shery, R. W. 1945. Flora of Panama. Ann. Missouri Bot. Gard. 32 (3): 48-57.